

CLAIMS

What is claimed is:

1. A push-to-talk controller in a wireless network for establishing a local ad hoc
5 group session between an inviting mobile terminal and local mobile terminals, the
push-to-talk controller comprising:
a presence server for identifying local mobile terminals within a local area of
the inviting mobile terminal; and
a push-to-talk server for establishing the local ad hoc group session between
10 the inviting mobile terminal and one or more local mobile terminals
responsive to a request from the inviting mobile terminal.
2. The push-to-talk controller of claim 1 wherein the push-to-talk server sends
an invite message to local mobile terminals identified by the presence server and
15 establishes the local ad hoc group session between the inviting mobile terminal and
one or more local mobile terminals that respond to the invite message.
3. The push-to-talk controller of claim 1 further comprising a core server that
receives the request from the inviting mobile terminal and forwards a list of the local
20 mobile terminals identified by the presence server to the push-to-talk server.
4. The push-to-talk controller of claim 1 further comprising a group server to filter
a list of local mobile terminals identified by the presence server based on at least one
of a media type restriction and an access control restriction to identify preferred local
25 mobile terminals.

5. The push-to-talk controller of claim 4 wherein the push-to-talk server sends an invite message to each of the preferred local mobile terminals and establishes the local ad hoc group session between the inviting mobile terminal and one or more of the preferred local mobile terminals that respond to the invite message.

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6. The push-to-talk controller of claim 4 wherein the group server further filters the local mobile terminals based on a subject of interest identified by the inviting mobile terminal.

10 7. The push-to-talk controller of claim 1 wherein the presence server determines a current location of the inviting mobile terminal.

8. The push-to-talk controller of claim 7 wherein the presence server defines the local area based on the current location of the inviting mobile terminal.

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9. The push-to-talk controller of claim 1 wherein the presence server receives a defined local area from the inviting mobile.

10. The push-to-talk controller of claim 1 wherein the presence server identifies local mobile terminals within the local area of the inviting mobile terminal by identifying local mobile terminals in at least a portion of the same cell as the inviting mobile terminal.

11. The push-to-talk controller of claim 1 wherein the presence server identifies local mobile terminals within the local area of the inviting mobile terminal by identifying local mobile terminals within a defined distance of the inviting mobile terminal.

12. The push-to-talk controller of claim 1 further comprising a memory for dynamically storing groups and dynamically storing updated lists of local mobile terminals within the local area of the inviting mobile terminal.

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13. A method of establishing a local ad hoc group session in a wireless network between an inviting mobile terminal and local mobile terminals, the method comprising:

5 receiving a request to initiate the local ad hoc group session from the inviting mobile terminal;
identifying local mobile terminals within a local area of the inviting mobile terminal; and
establishing the local ad hoc group session between the inviting mobile terminal and one or more of the local mobile terminals.

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14. The method of claim 13 wherein establishing the local ad hoc group session comprises:

15 sending an invite message to local mobile terminals within the local area of the inviting mobile terminal; and
establishing the local ad hoc group session between the inviting mobile terminal and one or more of the local mobile terminals that respond to the invite message.

15. The method of claim 13 further comprising identifying preferred local mobile terminals by filtering a list of local mobile terminals within the local area of the inviting mobile terminal based on at least one of a media type restriction and an access control restriction.

16. The method of claim 15 wherein establishing the local ad hoc group session comprises:

25 sending an invite message to one or more preferred local mobile terminals;
and

establishing the local ad hoc group session between the inviting mobile terminal and preferred local mobile terminals that respond to the invite message.

- 5 17. The method of claim 15 wherein identifying preferred local mobile terminals further comprises filtering the list of local mobile terminals within the local area of the inviting mobile terminal based on a subject of interest identified by the inviting mobile terminal.
- 10 18. The method of claim 13 wherein identifying local mobile terminals within a local area of the inviting mobile terminal comprises identifying local mobile terminals within at least a portion of a base station cell containing the inviting mobile terminal.
- 15 19. The method of claim 13 wherein identifying local mobile terminals within a local area of the inviting mobile terminal comprises identifying local mobile terminals within a defined distance of the inviting mobile terminal.
- 20 20. The method of claim 13 further comprising storing and dynamically updating groups of local mobile terminals within one or more local areas of the inviting mobile terminal.

21. A mobile terminal in a wireless network, the mobile terminal comprising:
a transceiver for transmitting and receiving signals in the wireless network;
and
a push-to-talk processor for initiating a local ad hoc group session between
5 the inviting mobile terminal and one or more local mobile terminals
within a local area of the inviting mobile terminal responsive to a user
input.
22. The mobile terminal of claim 21 further comprising a display and a menu
10 system displayed on the display, wherein a user requests the local ad hoc group
session by selecting a local ad hoc group option from a menu.
23. The mobile terminal of claim 22 wherein the menu system comprises a sub-
menu associated with the local ad hoc group option for selecting a subject of interest.
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24. The mobile terminal of claim 22 wherein the menu system comprises a sub-
menu associated with the local ad hoc group option for defining the local area.
25. The mobile terminal of claim 21 further comprising a multi-directional control
20 button located on an outer housing of the mobile terminal for requesting the local ad
hoc group session by the user.
26. The mobile terminal of claim 21 further comprising a location processor for
determining a current location of the inviting mobile terminal.
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27. The mobile terminal of claim 26 wherein the location processor defines the
local area based on the current location of the inviting mobile terminal.

28. A method of initiating a local ad hoc group session at an inviting mobile terminal comprising:
- initiating a local ad hoc group session by a user of the inviting mobile terminal; and
 - 5 sending a request to a network push-to-talk controller to establish the local ad hoc group session between the inviting mobile terminal and one or more local mobile terminals within a local area of the inviting mobile terminal responsive to the user initiation.
- 10 29. The method of claim 28 wherein initiating the local ad hoc group session by the user of the inviting mobile terminal comprises selecting a local ad hoc group option from a menu associated with the inviting mobile terminal.
30. The method of claim 28 wherein initiating the local ad hoc group session by
- 15 the user of the inviting mobile terminal comprises activating a multi-directional control button located on an outer housing of the inviting mobile terminal.
31. The method of claim 28 wherein initiating the local ad hoc group session by the user of the inviting mobile terminal comprises providing a push-to-talk voice
- 20 command to the inviting mobile terminal.
32. The method of claim 28 further comprising selecting a subject of interest and initiating the local ad hoc group session between the inviting mobile terminal and one or more local mobile terminals based on the subject of interest.
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33. The method of claim 28 further comprising defining the local area of the inviting mobile terminal.

34. The method of claim 33 wherein defining the local area of the inviting mobile terminal comprises defining the local area as an area within at least a portion of a base station cell containing the inviting mobile terminal.

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35. The method of claim 33 wherein defining the local area of the inviting mobile terminal comprises defining the local area as a defined distance from the inviting mobile terminal.

10 36. The method of claim 33 wherein defining the local area of the inviting mobile terminal comprises defining the local area based on user input.